

AMENDMENTS TO THE CLAIMS

1. (Canceled)
2. (Previously Presented) The communication control device according to claim 21, wherein said internal communication path connects said cell distributors and said selectors in a ring.
3. (Original) The communication control device according to claim 2, comprising a token cell generator for generating a token cell used to grant said transmission rights to one of said selectors, and outputting said token cell onto said internal communication path.
4. (Previously Presented) The communication control device according to claim 3, wherein said token cell generator is provided in said selector.
5. (Previously Presented) The communication control device according to claim 3, wherein said token cell generator is provided in said cell distributor.
6. (Original) The communication control device according to claim 3, wherein said selector outputs a communication cell received from a connected processor onto said internal communication path when said token cell is possessed thereby.
7. (Original) The communication control device according to claim 3, wherein said selector outputs said token cell onto said internal communication path after outputting all of the communication cells received from a connected processor.
8. (Previously Presented) The communication control device according to claim 21, wherein said internal communication path comprises a common bus connected to said cell distributors and said selectors.

9. (Original) The communication control device according to claim 8, comprising a transmission rights manager for granting said transmission rights to one of said selectors.
10. (Original) The communication control device according to claim 9, wherein, when a request for transmission rights is received from one of said selectors, said transmission rights manager grants transmission rights to said selector after another selector has lost transmission rights.
11. (Original) The communication control device according to claim 9, wherein said transmission rights manager is provided in each of said processor interfaces.
12. (Previously Presented) The communication control device according to claim 11, wherein, when a request for transmission rights is received from one of said selectors, said transmission rights manager grants said transmission right to the selector after receiving information indicating the assignment or loss of said transmission rights from another transmission rights manager.
13. (Previously Presented) The communication control device according to claim 21, wherein said processor interface comprises a buffer unit for temporarily storing communication cells transferred to a connected processor from said cell distributor.
14. (Original) The communication control device according to claim 13, wherein said buffer unit comprises:
- a buffer for temporarily storing communication cells;
 - a cell writer for writing communication cells received from said cell distributor to said buffer; and
 - a cell reader for reading the communication cells stored in said buffer and transmitting the communication cells to said processor.
15. (Previously Presented) The communication control device according to claim 21, wherein

said processor interface comprises a buffer unit for temporarily storing communication cells transmitted from said processor to said selector.

16. (Original) The communication control device according to claim 15, wherein said buffer unit comprises:

- a buffer for temporarily storing communication cells;
- a cell writer for writing communication cells received from said processor to said buffer; and
- a cell reader for reading the communication cells stored in said buffer and transmitting the communication cells to said cell distributor.

17. (Previously Presented) The communication control device according to claim 21, wherein said processor interface comprises a format converter for converting the format of communication cells received from another of said processor interfaces via said internal communication path.

18. (Previously Presented) The communication control device according to claim 21, wherein said processor interface comprises a format converter for converting the format of communication cells to be transmitted to another of said processor interfaces via said internal communication path.

19. (Canceled)

20. (Previously Presented) The communication control device according to claim 21, comprising a format converter for converting the format of communication cells received onto said internal communication path from said external communication pathways and the format of communication cells to be transmitted to said externals from said internal communication path.

21. (Currently Amended) A communication control device comprising:
a plurality of processors which perform predetermined parallel processing cooperatively;

a plurality of processor interfaces having one or more cell distributors and one or more selectors, in which each of said processors is connected to one of said cell distributors and one of said selectors; [[and]]

an internal communication path which connects said cell distributors, said selectors, said plurality of processors, a first external communication path, and a second external communication path; and

a plurality of control buses which connect said processors to each other:

wherein said cell distributors receive communication cells from said internal communication path and transfer the received communication cells to the corresponding processor when the destination of the received communication cells are the corresponding processor;

wherein said cell distributors are coupled to receive communication cells from said internal communication path and output said communication cells onto said internal communication path when the destination of said received communication cells is not to the corresponding processor;

wherein said selectors receive communication cells from said corresponding processor and output said communication cells onto said internal communication path when possessing a transmission rights;

wherein said transmission rights are received and possessed by one selector at a time and said selectors abandon said transmission rights by outputting said transmission rights when said selectors end the outputting of the communication cells received from the corresponding processor;

wherein said control buses have a lower communication speed than that of said internal communication path; and

wherein the communication control device processes said communication cells received from the first external communication path and transmits the communication cells to the second external communication path.

22. (Currently Amended) A communication control device comprising:

at least a first and a second processor which perform predetermined parallel processing cooperatively;

at least a first cell distributor connected to at least said first processor and a second cell distributor connected to at least said second processor;

at least a first selector connected to at least said first cell distributor and said first processor and a second selector connected to at least said second cell distributor and second processor;

at least a first external communication path and a second external communication path;
[[and]]

an internal communication path which connects at least said first and second cell distributors, said first and second selectors, said first and second processors, and said first and second external communication paths; and

a plurality of control buses which connect at least said first and second processors to each other:

wherein said first cell distributor receives communication cells via said internal communication path and transfers said received communication cells to said first processor when the destination of said received cell is said first processor[[:]];

wherein said second cell distributor receives communication cells via said internal communication path and transfers said received communication cells to said second processor when the destination of said received cell is said second processor[[:]];

wherein said first cell distributor receives communication cells via said internal communication path and transfers said received communication cells to said first selector when the destination of said received cell is not said first processor[[:]];

wherein said second cell distributor receives communication cells via said internal communication path and transfers said received communication cells to said second selector when the destination of said received cell is not said second processor[[:]];

wherein said first selector receives said communication cells from said first processor and outputs said communication cells onto said internal communication path when possessing a transmission rights[[:]];

wherein said second selector receives said communication cells from said second processor and outputs said communication cells onto said internal communication path when possessing said transmission rights[[:]];

wherein said first selector possesses said transmission rights when said first selector receives a token cell and loses said transmission rights when said first selector outputs said token cell after said communication cells have been output[[:]];

wherein said second selector possesses said transmission rights when said second selector receives a token cell and loses said transmission rights when said second selector outputs said token cell after said communication cells have been output[[:]];

wherein said token cell is possessed by one selector at a time[[:]];

wherein said control buses have a lower communication speed than that of said internal communication path; and

wherein said communication control device processes said communication cells received from said first external communication path and transmits said communication cells to said second external communication path.